

if a scientist were to specify only
one retrieval system

SCIENCE CITATION INDEX

would have to be it

with the SCIENCE CITATION INDEX - 1964

**you can answer vital questions like
these...in a matter of minutes.**

1. Has this paper been cited?
2. Has there been a review on this subject?
3. Has this concept been applied?
4. Has this theory been confirmed?
5. Has this work been extended?
6. Has this method been improved?
7. Has this suggestion been tried?
8. Has this patent been cited in the journal literature?
9. Has this patent been elaborated by later patents?
10. Is there a new synthesis for this old compound?
11. Has this chemical been tested for biological activity?
12. Has this drug had a clinical evaluation?
13. Is this idea really original?
14. Was this "to-be-published" paper published and where?
15. Where's the full paper for this preliminary communication?
16. Has this technical report been published in a journal?
17. Have there been subsequent errata and correction notes published?
18. Where is the data for an introduction to this paper?
19. Where is the raw data for a review article on this subject?
20. Is there sufficient new information to warrant up-dating a chapter in a book?
21. What is the raw data for an analytical historical network diagram?
22. Who else is working in this field?
23. Is there data to delineate this field of study?
24. What are some potential new markets for this instrument?
25. Has this film been reviewed?
26. Has this book been reviewed?
27. What published work acknowledges this grant or contract?
28. Has this article been abstracted in primary journals?
29. Has this product been applied to a new field?
30. What are all the current works in which this man is primary author?
31. What are all the current works in which this man is secondary author?
32. What older works has this man written?
33. Have this man's works been compiled?

To locate sources which cite a particular paper, first look for the cited or reference author or patent number, located on the left.

For each cited paper by that author there is a dashed line which continues to the column reserved for the year of reference publication, followed by journal, volume and page. To the right of each cited patent is the year and country.

When a given reference has been cited more than once, the sources are arranged alphabetically by author. Each type of source item is further identified by a code. Note: only the first author is listed in the Science Citation Index proper. See the Source Index for all citing co-authors and full article titles.

	Cited Author	Citing Author	Reference Year	Publication	Source Year	Volume	Page	
Reference	SANDON IR		*06	J AM CHEM SOC		31	1359	
	KONIKOFF JJ			AEROSP MED	64	35	703	
Source		PASTERNAK R	12	J AM CHEM SOC		37	1312	*before and after cited year identifies earliest paper cited for that author
		FORMAN R	12	PHYS REV		37	403	
		BECKER JA	13	J AM CHEM SOC		35	1653	
		LAFFERTY JM		J APPL PHYS	64	35	413	
				J APPL PHYS	E 64	35	426	
		JAFFE LD	13	PHYS REV		5	331	
		PANISH MB		NUCLEONICS	64	N 7	95	
		SCHWARZ H		J CHEM PHYS	64	37	1917	
				REV SCI INS	64	35	196	
			13	PHYS REV		5	333	
		STRICKLER H		P SOC EXP M	64	110	311	
			13	PHYS REV		5	452	
		FOX R		REV SCI INS	L 64	35	79	
		HENSLEY EB		J APPL PHYS	64	35	303	
	SARSON LM		*60	FED PROC		22	66	
	JOHNSTON CL			J CLIN INV	A 64	43	745	
			60	J CLIN INVEST		42	1017	
	KOPPEL JL			SURG GYN OB	64	115	317	
			62	THROMB DIATH HAEM S		7	49	
	HJORT PF			THROMB DIAT	64	9	582	
			63	N ENG J MED		267	859	
	SARSON LM			N ENG J MED	C 64	268	1095	
	SASSI UR		*5	*PRIVATE COMMUNICATION				
	BARTON DH			J AM CHEM S	64	86	4085	
Reference			54	J CLIN INVEST		36	959	
	WAHI PN			I J MED RES	64	52	613	
Sources			55	SCIENCE		124	41	
	KROMAN HS			AM J OPHTH	64	55	79	
	SEEBER E			3125698 US	P 64			
			58	CITED INDIRECTLY				
	SEEBER E			N-S ARCHIV	64	245	103	
			64	J CLIN INVEST		41	683	
	BARTTER FC			ISR J E MED	64	77	182	
	BELL NH			AM R RESP D	64	87	29	

Codes indicating type of source item

- A = abstracts of published items
- B = critical reviews of books, films, articles
- C = corrections, errata, etc.
- D = discussions, conference items
- E = editorials, editorial-like items
- I = items about individuals (tributes, obituaries, etc.)
- L = letters, communications, etc.
- M = proceedings from meetings
- N = technical notes
- P = patents
- R = reviews & bibliographies
- Blank = articles, reports, technical papers, etc.

non-journal entry (lozenge symbol)

	Reference Patent Number	Reference Year	Reference Inventor	Reference Country	Reference Application or Reissue			
	1017880		*57	CALGW		GERM	APPL	
	WARSEWA HR		3121350	US	P 64			
Source Author	1029445		*58			GERM		
	GRAHAM HS		3119642	US	P 64			
	YAMAZAKI T		JAP J EXP M	64		34	25	Source Volume
	1107202		*14	SAVAGE		US		
	DYSON WN		P ROY SOC A	64		277	123	Source Page
	JONES JB		25103 US RE	P 64				
	PFLEIDER K		3120061	US	P 64			
	1110026		*14	ZARS		US		
	WILSON WJ		3118234	US	P 64			
Source Publication or Patent Number	1110350		*55			FRAN		
	GIGNOUX DMP		3120736	US	P 64			
	1111742		*55			FRAN		
	BOGAERTS LC		3118259	US	P 64			
	ROSSEN HA		3118229	US	P 64			
	1113905		*14	PEASE		US		
	FLEISSNE G		3119168	US	P 64			
Codes Indicating Type of Source Item	1116654		*14	WENZELMANN		US		
	BENZING EP		3118002	US	P 64			Reissued Source Patent
	MARTIN EW		3119153	US	P 64			

Another important difference between conventional and citation indexing is the time dimension. In the conventional index the source literature is the new or current year indexed. The chronological coverage of a conventional index corresponds to the coverage of the *Source Index* which accompanies the *Science Citation Index* proper. On the other hand the citation index proper not only indexes the current source literature, but merges the new with the older re-indexed data. Thus, the *Science Citation Index*, as a self-organizing system is constantly being upgraded by the feedback of more current information. Advances in science are quickly reflected in the index, thereby bringing old information up-to-date.

Consider now the basis for selecting the articles to be abstracted and indexed. Discipline-oriented services are selective. According to the interpretation of editors or abstractors, individual articles may or may not be covered. In the *Science Citation Index* complete coverage is guaranteed. Every source article, in every journal covered is indexed and every reference citation in every article is included in the index. When we say we cover an interdisciplinary journal like the *Proceedings of the Academy of Sciences USSR*, we do not cover just the physics or chemistry sections -- we cover all sections from astronomy to zoology. This comprehensive approach is vital because it gives a significance and degree of certainty to a literature search not hitherto possible -- especially when the result is negative.

In the conventional index, a negative result is not only uncertain due to selective coverage because you are never certain whether a particular article was covered in the particular index searched. It is also uncertain because your approach to the index, your decoding process, is usually different than that of the indexer. In the *Science Citation Index*, however, a negative search result is meaningful and not uncertain since the coverage is fully defined and no decoding is required.

Another point concerns the ease with which one can locate the pertinent portion of the retrieved document containing the specific information desired. Thus, the indexing or abstracting services lead you to the document -- not the page or paragraph containing the information desired. This can be a time-consuming process, especially in a foreign language document. The *Science Citation Index* not only leads you to the source document which contains the information. In addition, the citation that caused the document to be retrieved, also identifies the pertinent paragraph involved. Then the decision can be made whether to read the entire paper or not.

After retrieving a document with the aid of a conventional index, you can search back in time through the bibliography. Your starting point, therefore, is very critical. If it is not the most recent paper, it is impossible to find all the current papers.

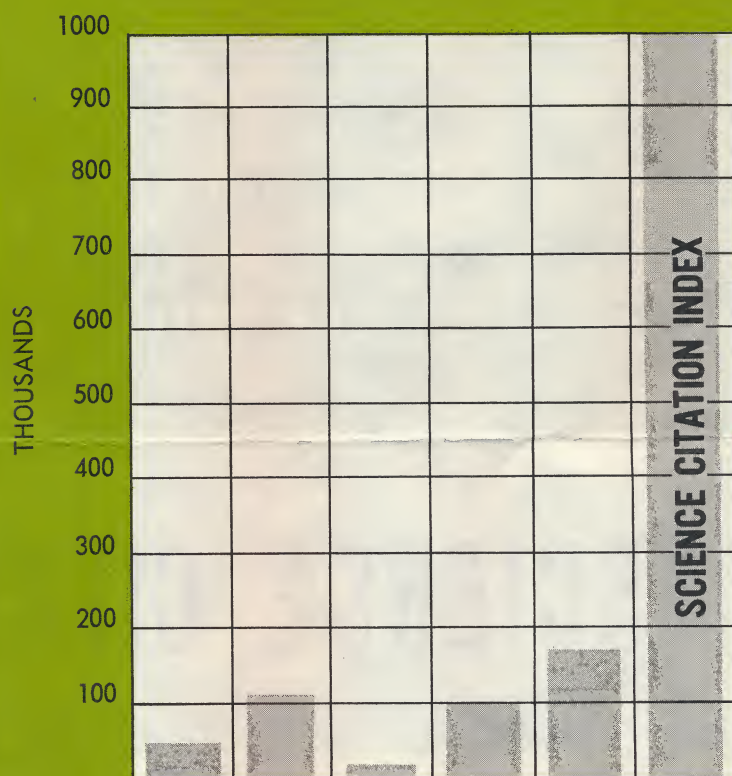
In the *Science Citation Index*, you not only go backwards in time through the bibliographies of documents, but also, you can come forward in time, retrieving documents even more current than your starting point. This added dimension enables you to build up your bibliography by alternately examining the citation index and items in the bibliographies of the papers retrieved.

For further reading, see also E. Garfield, "Citation Indexes for Science", *Science*, 122, 108(1955); E. Garfield, "Science Citation Index - a new dimension in indexing", *Science*, 144, 649(1964).

Compare the coverage of

SCIENCE CITATION INDEX - 1964

to conventional discipline-oriented services



In 1963

the leading nuclear science abstracting service	46,000
the leading medical abstracting service	110,000
the leading physics abstracting service	25,000
the leading biological abstracting service	100,000
the leading chemical abstracting service	175,000
	approximately 456,000 items indexed*

*Because of overlap among these services, this figure comprises about 325,000 unique items indexed.

SCIENCE CITATION INDEX - 1964

approximately 1,000,000 unique items indexed

By any measure this is more indexing than has ever been done for a single year by any conventional service we know of

SCIENCE CITATION INDEX - 1964 contains

- * three quarterly issues and a massive annual cumulative
- * each with exclusive SOURCE INDEX WITH TITLES

1st quarterly - July 1964

2nd quarterly - October 1964

3rd quarterly - December 1964

annual cumulative - March 1965

It is estimated by the end of 1964, SCIENCE CITATION INDEX - 1964 will include

- * approximately 2,000,000 reference citations
more than 80% journal citations with remainder: non-journal citations including patents, government reports, books, meetings, dissertations, contracts, circulars, personal communications, etc.
- * citations to more than 30,000 different publications indexed
- * approximately 200,000 current 1964 source items including all 1964 U.S. patents
citing approximately 1,000,000 unique works published in any period of recorded history
- * hundreds of key source journals processed across the life and physical and social sciences published in 1964
- * source journals from over 30 different countries
- * every major subject category within the scope of science

SOURCE INDEX WITH TITLES

The *Source Index* represents a major advance in the indexing of current source material by author. All source items processed for the *Science Citation Index* are indexed in order by first author.

Every entry for the primary author includes all co-authors and the full title of the item, as well as the publication, volume, page, year, type of source item (review, letter, correction, etc.), number of references in the bibliography of that source, the issue number, part and/or supplement number, and the ISI accession number for that journal issue.

The *Source Index* contains a "see" line for every secondary author of every source item. These "see" references include the first author, journal, volume and page for citation verification -- an exclusive feature of the *Science Citation Index*.

Now, for the first time, it is possible to determine a scientist's complete list of current papers without checking co-authors.

Exclusive with the SCI

```
ANDERSON WH
J AM MED A 186 763 64      8R N6 48283
PREVENTION OF POSTOPERATIVE PULMONARY
COMPLICATIONS - USE OF ISOPROTERENOL
INTERMITTENT POSITIVE PRESSURE BREATHING ON
INSPIRATION

ANDRIEU R TEL AKT
3120576 US 64 P 6R FEB 4
CL178/5.4 STABILIZATION OF MAGNETICALLY
RECORDED COLOR TELEVISION SIGNALS

ARAKAWA J SEE ARAKAWA K DIS NER SYS 25 437

ARAKAWA K ARAKAWA J
DIS NER SYS 25 437 64 R 24R N3 47534
SPLIT-THICKNESS SKIN GRAFT ON GRANULATED
WOUNDS FOLLOWING EXTENSIVE FISULECTOMY -
REPORT OF 150 CASES

ARBUZOB SY GENERALOV V
DAN SSSR 154 198 64 13R N6 49287
ARRANGEMENT COLLISIONS - 2-PARTICLE EXCHANGE

ARTHUR JBL LITTLE NF SMITH BW
J APPL BACT 27
```

The data shown here is a simulation of the type of material which appears in the *Science Citation Index* - 1964. The data in these entries is fictitious.

COMPARE

SCIENCE CITATION INDEX

WITH EXISTING SERVICES AND LEARN

WHY SCIENTISTS THE WORLD OVER

ARE SPECIFYING

SCIENCE CITATION INDEX

FOR THEIR PERSONAL

INFORMATION REQUIREMENTS

Science Citation Index

concept oriented
experiential
a posteriori
cross-disciplinary &
comprehensive
indexing by trained subject
specialists not required
no decoding required
no cross-referencing
required
limited only by size
of world's literature
chronologically unrestricted
& flexible (new & old)
constant re-indexing
self-organizing
user goes both forward &
backward in time
negative result meaningful --
coverage fully defined &
decoding not required
portion of document
retrieved easily identifiable

Conventional services

semantically oriented
language limited
a priori
discipline-oriented &
selective
indexing (encoding) by
trained indexers required
decoding by trained users
required
cross-referencing required
("see" & "see-also"
references)
vocabulary for indexing
limited (10,000 terms)
chronologically restricted
(new only)
user can go only backward
in time
negative result uncertain
due to selective coverage
& decoding process
pertinent portion of
document not easily
identifiable

As you know, conventional indexes are language limited and semantically oriented. Indexing is based on the use of words which the indexer hopes is unambiguous. It is also tacitly assumed that the information in each indexed document is fixed and unchanging for all time. In reality, each of us interprets words differently and reads different meanings into each document. This is because the user has his own experiences to which he can relate, in an *a posteriori* fashion, the meaning he gives to that document. That is why we say citation indexing is *experiential*. The author who cites an earlier paper provides an insight which cannot, in practice, be achieved in conventional indexing. We also say the citation index is concept oriented. Each reference to the earlier literature identifies a unique conceptual relationship between the cited and the citing paper. It is not restricted by linguistic coding difficulties.

In conventional indexing from three to five descriptors or subject headings are usually selected which attempt to describe the "most important" topics in the source paper. Each source document is treated essentially as an independent unit, as though it existed in a vacuum.

In the *Science Citation Index*, not only is each new source document indexed, but it is also placed in proper perspective and relationship to the past literature. Each time a new document is indexed, the previous literature is simultaneously re-indexed in terms of its current utilization.

The indexing in conventional systems is permanent and static. As the nomenclature of science changes, classical indexes become more obsolete. To change this characteristic would require constant re-indexing. This re-indexing is precisely what is done automatically in the *Science Citation Index*. Each new reference to the old literature does, in fact, re-index the particular document cited. Thus, the citation index can be regarded as a self-organizing system where each new citation modifies the previously existing store of information.

In conventional indexes, the indexing or encoding must be done by trained indexers. The user must also be extremely well trained. He must learn to use each particular index, each particular preferred terminology. The best designed word index must therefore be highly cross-referenced to aid the user in the decoding process. Even for some of the most obvious synonyms, the various indexing and abstracting services, like the documents they must deal with, use different terms. However, in spite of the richness that is inherent in English and other languages, a typical large-scale alphabetic index will try to restrict itself to an authority list or a thesaurus of five to ten thousand terms.

In sharp contrast to the conventional index, the *Science Citation Index* does not require indexers trained in special nomenclature. This is not to say we do not use experts. We use the most expert subject specialists -- the authors who provide the citations, and by so doing, index the literature for us. Once the literature is processed, the index that is produced does not require decoding on the part of the user. Anyone can search the *Science Citation Index* with a few minutes of instruction. Cross-referencing and ambiguous terminology are completely eliminated. The size of the indexing "vocabulary" is literally unlimited since the concepts represented by each article or page in the literature is available to the author of the citing paper. In the same fashion the *Science Citation Index* avoids the difficulties of changing nomenclature and specialized jargons.

what is the **SCIENCE CITATION INDEX**

the need

Every research scientist has, on one occasion or another, been stumped by the complex problems of searching the maze of accumulating scientific literature.

Once upon a time he considered it adequate to depend upon classically organized indexing systems.

For today's complex search requirements, traditional methods have distinct disadvantages and limitations. In this modern era, modern techniques of documentation are needed to lead the scientist out of his dilemma.

The INSTITUTE FOR SCIENTIFIC INFORMATION believes the SCIENCE CITATION INDEX is the practical solution.

versus conventional systems

The SCIENCE CITATION INDEX is a dynamic information system which not only makes straightforward, up-to-date literature searching practical, but also stimulates the process of information discovery.

It provides a variety of features beyond the scope and power of conventional indexing systems which cannot cope with the increasing welter of data erupting from modern poolings of scientific talent.

This disturbing mass of information, accentuated by the burgeoning of new specialties has all but paralyzed conventional techniques.

Paradoxically, this same prodigious growth of knowledge is the vital force of the SCIENCE CITATION INDEX method.

Indeed, the SCIENCE CITATION INDEX developed by the INSTITUTE FOR SCIENTIFIC INFORMATION is a self-organizing system which thrives on a growing literature.

It is an orderly arrangement that improves qualitatively as the quantitative character of the literature changes, constantly adding to, modifying and developing itself.

A living, growing system is achieved that rescues much of what is otherwise destined to become debris, lost and forever useless, and turns it into more meaningful, retrievable knowledge.

the method: concept and indexing

To appreciate the SCIENCE CITATION INDEX method, two major points must be emphasized and clearly understood: the basic concept and the basic indexing technique.

The SCIENCE CITATION INDEX idea is founded upon the pragmatic philosophy—"what has happened since?"—*WHAT* has a man published and precisely *WHO* and *WHERE* in any field of endeavor, has cited *ANY* of his works following its publication. We believe this is fundamental to research activity — to the scientific method. In short, SCIENCE CITATION INDEX is founded on an *a posteriori* concept.

Dr. Eugene Garfield, Director of THE INSTITUTE, has pointed out "the 'logic' of all conventional scientific classifications has inevitably broken down with experience. Aristotelian logic has been a chain around the neck of the scientist and classifier alike. If the old rigid classifications

are eliminated, the problems of changing terminology and the other inherent limitations of *a priori* indexing can be solved."

Thus, in creating the SCIENCE CITATION INDEX, the familiar hierarchal classifications, often illogical and non-specific to the scientist, are discarded. Because the scientist is usually aware of a particular work applicable to his specialized interests, he would begin a search in the SCIENCE CITATION INDEX with a specific paper.

In conventional language-oriented indexing systems, this is impossible.

The SCIENCE CITATION INDEX thus introduces a new technique of indexing and searching. It provides the scientist with an improved starting point: the *specific work* of a *specific author* at a *specific time* and *location*—author, year, journal, volume and page . . . and from there the searcher is *brought forward in time* to subsequent papers relating to the earlier paper.

The SCIENCE CITATION INDEX lists the reference (cited) author and his work, and with it, groups together all source (citing) authors and papers, who have referred to that same work since its publication. Each of the author's cited works, accompanied by its citing authors, is arranged chronologically.

As rapidly as they become cited, the SCIENCE CITATION INDEX continues to add new works of an author and/or new citation listings to his previously recorded papers.

The result of this process is a comprehensive, interdisciplinary, elastic index which is always up-to-date and encompasses the entire scope of scientific literature.

for example . . .

Consider Dr. Joshua Lederberg's article, "Genes and Antibodies", published in *Science* 129, 1649, (1959). The SCIENCE CITATION INDEX shows that in 1961 alone, this paper was cited in 26 papers.

Thus, the researcher, interested in following developments since the publication of this particular work could instantly identify a core of scientists whose work is related to Lederberg's article in *Science*, but had published in journals covering subjects from cancer research to space science.

Furthermore, the researcher could find listed under Lederberg's name, 59 additional works by him, published between 1946 and 1961, each together with its own group of citing articles.

result: brings the user "forward in time"

Now for the first time in the indexing of science literature, the researcher is brought forward in time to the most recent published work referring to a particular paper.

Conventional indexing systems lead the user to the past only, showing who has preceded, rather than who has followed an author.

Still, in the SCIENCE CITATION INDEX, the searcher can, if he chooses, go similarly backward in time, and compile additional material either by consulting bibliographies appearing in the various citing works or earlier papers of the same author listed in the SCIENCE CITATION INDEX.

This technique of "cycling" traces a literature network which can satisfy a need not only for covering a research area in depth and for browsing, but also for keeping pace with developments in a chosen area of interest, reducing unintentional and unnecessary duplication of research.

result: "an association of ideas"

Further analyses define the interdisciplinary character of the SCIENCE CITATION INDEX and show that seemingly unrelated material is pulled together, cutting across the disciplinary lines implied by the journal title.

Because papers are collated on the basis of common citations, works that might never be brought together, by even highly sophisticated indexing, are routinely pulled to-

gether in the SCIENCE CITATION INDEX.

An interesting example is the unexpected citation relationship uncovered between C. H. Whitnah's paper in *J. Dairy Science* 42, 227 (1959) and a paper by Albert Einstein, *Ann. Physik* 19, 289 (1906). The apparently incongruous combination proves to be a legitimate reference to an equation used in calculating molecular dimensions and applied in a study of the physical properties of milk.

This same article by Einstein was cited in an article by V. V. Varadaiah, *J. Polymer Science* 46, 528 (1960) in which Einstein's equation was used as a basis for calculations relating to the Flory universal constant, in the equation for intrinsic viscosity.

Yet in two other papers by P. H. Elworthy, one in 1959, *J. Chem. Soc.* p. 1951, and a 1961 paper *J. Pharm. Pharm.* 13, 663, the Einstein equation was cited in a discussion of the size and shape of lecithin micelles.

Still again in a 1961 paper by K. Yagi, *Comp. Bioch.* 3, 73, the Einstein equation is employed in the study of mechanical and colloidal properties of amoeba protoplasm.

S. G. Schultz in *J. Gen. Physiol.* 44, 1189 (1961) conducted biophysical studies in which he used the Einstein viscosity equation and confirmed atomic dimensions compiled by L. Pauling.

The Einstein article well illustrates the utility of the SCIENCE CITATION INDEX in crossing scientific disciplines, in picking up isolated, seemingly unrelated bits of information buried in the literature.

result: a dynamic process

The SCIENCE CITATION INDEX is based on the axiom that every author is an "indexer"—that is, in effect, each time he provides a citation in his paper, he is indexing some aspect of his work and re-indexing the scientific literature.

The natural interplay of old and new upon each other is an indissoluble part of the SCIENCE CITATION INDEX. These constant additions and modifications in the SCIENCE CITATION INDEX are its source of dynamic power. In this aspect, the SCIENCE CITATION INDEX simulates the learning process, reflecting the increased and changed knowledge of contemporary science.

result: relates old and new

What is current? In the SCIENCE CITATION INDEX method there are no artificial time barriers.

Most conventional indexing services are limited to a relatively short and specific time period: the past six months or the past year.

In the SCIENCE CITATION INDEX, older, but still currently important information and more recent information come together naturally, as illustrated in the citations to Einstein's 1906 article by five contemporary writers. It is a time-binding device, relating antecedent *parent* discoveries with their subsequent descendant *offspring*.

result: no intellectual or language barriers

By eliminating arbitrary "subject" classifications, the SCIENCE CITATION INDEX eliminates intellectual indexing decisions by catalogers.

Compiled by a unique combination of machine and clerical process, there are none of the omissions, inconsistencies, ambiguities, errors or semantic confusions of language-oriented indexing.

Typographical errors and other errors existing in the literature and inevitably made by men and machines, are usually offset by redundancy in the literature itself—a valuable self-correcting feature.

result: better scientist-to-scientist communication

By arranging literature according to citational relationships, the SCIENCE CITATION INDEX offers a simplified, practical solution for rapidly tracing the development or current evaluation of an idea, method or discovery—and facilitating their evaluation.

Unfortunately, authors may not know what becomes of their work after it appears in print. Many are totally unaware of new insights, meanings and implications of their works revealed by their contemporaries.

Through the SCIENCE CITATION INDEX, the scientist can see which scientists are citing his works—using his methods or that of colleagues—modifying them, improving, criticizing, etc. Communication is thereby fostered, especially between researchers in different fields.

the GRINGAUZ CASE and the SCIENCE CITATION INDEX

A "letter to the editor" in *Science*, 136, 594 (1962), called attention to the fact that in 1960 Dr. K. Gringauz, a Soviet scientist, discovered the existence of a third radiation belt, at the altitude of 40,000 miles. The data were published in the February and April (1960) issues of *Proceedings of the Soviet Academy of Sciences (Dokl. Akad. Nauk SSSR)* 131, 1301 (1960); 135, 48 (1960). (The English translation issues appeared in July and September of 1960.) However, most American scientists working in the same field as Gringauz apparently remained unaware of the Soviet report because in 1961 it was announced that a third radiation belt (at the same altitude) had been discovered by the U. S. Explorer XII satellite, without making reference to the Gringauz paper.

The Gringauz case dramatically points out that American scientists sometimes are not aware of the latest Soviet research in their individual specialties. The SCIENCE CITATION INDEX promises to help avoid such blatant oversights.

Scientists interested in developments in the field of atmospheric radiation certainly would be familiar with the work of James Van Allen, the discoverer of the Van Allen radiation belts. Using a preliminary citation index file, under Van Allen's name, one could have quickly found the above mentioned reference by Gringauz, in which he cites Van Allen's paper. This Gringauz article also cites the detailed first Gringauz paper and discusses the Russian discovery of the third radiation belt in the first paragraph.

Thus, a two minute search, using only a preliminary file, starting from obvious entries, uncovered the key articles on the Soviet discovery. Had the index been available in 1960, scientists in government research could have been better informed on Soviet space research, and eliminated the information lag.

a comprehensive selective service

Although output can be as comprehensive as input, computer processes can also yield a selective citation index service suitable to any specific field or request.

other applications

Although the SCIENCE CITATION INDEX was originally designed to be used for simple, direct retrieval of scientific information, it can facilitate utilization of the literature for sociological and historical evaluations and applications including:

The evaluation of the impact of a paper, a man's total works, a journal, material published during specific time intervals, the works of students of specific teachers, works coming out of a university or department, work financially sponsored by a specific agency.

The SCIENCE CITATION INDEX may be used to good advantage in writing historical reviews and descriptions of the evolution of specific subjects.

It may be used to study journal utilizations, measuring literature habits of scientists, effectiveness of specific journals in reaching specific audiences, purchasing requirements of specific libraries, library's need for maintaining files of most-frequently requested reprints, utilization of literature of one country by another, impact of scientific discoveries and inventions on technological development.

INSTITUTE FOR SCIENTIFIC INFORMATION

325 Chestnut Street Philadelphia Pa 19106

SCIENCE CITATION INDEX - ASCA - ISI SOURCE DATA TAPES

Coverage of Current Source Publications as of Sept 1965

All current U.S. Patents as well as the Journals listed below :

ISI Abbreviation	Expanded Title	ISI Abbreviation	Expanded Title	ISI Abbreviation	Expanded Title	ISI Abbreviation	Expanded Title	ISI Abbreviation	Expanded Title
A I CH E J	A I CH E J	B A FR CANC	BULL ASSOC FRANC ETUDE CANCER	GANN	GANN	J I METALS	J INST METALS	PEO CLIN NA	PEDIAT CLIN N AM
A V AN LEEUW	ANTON LEEUWENHOEK J MICROB	B AM MATH S	BULL AM MATH SOC	GASTROENTA	GASTROENTEROLOGIA	J I PETROL	J INST PETROL	PEDIATRICS	PEDIATRICS
ACT ALLERG	ACTA ALLERGO	B CHEM S J	BULL CHEM SOC JAPAN	GASTROENTY	GASTROENTEROLOGY	J IMMUNOL	J IMMUNOL	PER POLY CE	PERIODICA POLYTECH CHEM ENG
ACT ANAE SC	ACTA ANAESTHESIOLOGIA SCAND	B CSAR BELG	BULL CLASSE SCI ACAD ROY BELG	GEN C ENDOC	GEN COMP ENDOCRINOL	J INDIAN I	J INDIAN INST SCI	PER POLY EE	PERIODICA POLYTECH ELEC ENG
ACT ANATOM	ACTA ANAT	* B EX BID R	B EXP BIOL MED USSR ENGL	GENET IBER	GENET IBERICA	J INFEC OIS	J INFECT OIS	PER POLY EN	PERIODICA POLYTECH ENG
ACT BIO MED	ACTA BIOL MED GERMAN	B I QUIM	BOL INST QUIM UNIV MEX	GENET PSYCH	GENET PSYCHOL MONOGR	J INORG NUC	J INORG NUC CHEM	PERSP BIOL	PERSPECTIVES BIOL MED
ACT BIOCH P	ACTA BIOCHEM POLON	B ITCHEM BIOL	BOL SOC ITAL BIOL SPER	GENET RES	GENET RES	J INSECT PAT	J INSECT PATHOL	PFUG ARCH	PLUGERS ARCH GES PHYSIOL
ACT BIOL H	ACTA BIOL ACAD SCI HUNG	B J HOPK H	BULL JOHNS HOPKINS HOSP	GENETICA	GENETICA	J INVER PAT	J INVERT PATHOL	PHARM ACT H	PHARM ACTA HELV
ACT CHEM SC	ACTA CHEM SCAND	B MATH BIOP	BULL MATH BIOPHYS	GENETICS	GENETICS	J INVER DER	J INVER DERM	PHARM PRAX	PHARM PRAXIS BEIL PHARMAZIE
ACT CHIM H	ACTA CHIM ACAD SCI HUNG	B NY AC MED	BULL NY ACAD MED	GEODCH COS A	GEODCH COSMOCHIM ACTA	J IRON ST I	J IRON STEEL INST LONDON	PHARM REV	PHARMACOL REV
ACT CHIR H	ACTA CHIRURG ACAD SCI HUNG	B POL BIOL	BULL ACAD POLON SCI BIOL	GEODCH INT	GEODCH INTERN	J LA CL MED	J LAB CLIN MED	PHARMAZIE	PHARMAZIE
ACT CLIENT V	ACTA CLIENT VENEZOLANA	B POL CHEM	BULL ACAD POLON SCI CHIM	GEODS MET	GEODS METEOROL GENDA	J LANCET	J LANCET	PHIT ROY A	PHIL TRANS ROY SOC LONDON A
ACT CRYST	ACTA CRYST	B POL GEOL	BULL ACAD POLON SCI GEOL GEODS	GEOL S AM B	GEOL SOC AM BULL	J LESSC MET	J LESS-COMMON METALS	PHI T ROY R	PHIL TRANS ROY SOC LONDON B
ACT CYTOL	ACTA CYTOLOG	B POL MATH	BULL ACAD POLON SCI MATH PHYS	GEOPHYSICS	GEOPHYSICS	J LIPOD RES	J LIPOD RES	PHIL RES R	PHILIPS RES REPT
ACT DER-VEN	ACTA DERMATO-VENEREOL	B POL TECH	BULL ACAD POLON SCI TECH	GERIATRICS	GERIATRICS	J LOND MATH	J LOND MATH SOC	PHIL TECH R	PHILIPS TECH REV
ACT ENDOCR	ACTA ENDOCRINOL	B S CHIM BE	BULL SOC CHIM BELGES	GERONTOL CLIN	GERONTOL CLIN	J MARINE BI	J MARINE BIOL ASSOC UK	PHIL MAG	PHIL MAG
ACT GENET M	ACTA GENET MED GEMELL	B S CHIM BI	BULL SOC CHIM BIOL FRANC	GERONTOL GIGIA	GERONTOL GIGIA	J MATH ANAL	J MATH ANAL	PHONETICA	PHONETICA
ACT GENET S	ACTA GENET STATIST MED	B S CHIM FR	BULL SOC CHIM FRANC	GIDR MICROB	GIDR MICROB	J MATH JAP	J MATH SOC JAPAN	PHOT SCI EN	PHOT SCI ENG
ACT HAEMAT	ACTA HAEMATOL	B S FR CER	BULL SOC FRANC CERAM	GLASS TECH	GLASS TECH	J MATH MECH	J MATH MECH	PHYS C GLAS	PHYS CHEM GLASSES
ACT HEP-SPL	ACTA HEPATO-SPLENOL	B S FR MIN	BULL SOC FRANC MINERAL CRIST	GROWTH	GROWTH	J MATH P A	J MATH PURE APPL	PHYS FLUIDS	PHYS FLUIDS
ACT HISTOCH	ACTA HISTOCHEM	B SC AK MED	BULL SCHWEIZ AKAD MED WISST	GUT	GUT	J MATH PHYS	J MATHEMATICAL PHYS	PHYS KONO M	PHYSIK KONENS MATERIE
ACT MED H	ACTA MED ACAD SCI HUNG	B WHO	BULL WHO	GYNAECOL	GYNAECOLOGIA	J MATH PHYS	J MATHEMATICS PHYS	PHYS LETTER	PHYS LETTERS
ACT MED H	ACTA MED ACAD SCI HUNG	B ACT REV	BULL ACT REV	H Z PHYS	H Z PHYS	J MATH PSYC	J MATH PSYCHOL	PHYS MED BIOL	PHYS MED BIOL
ACT METALL	ACTA MET	BEHAV SCI	BEHAV SCI	HEALTH PHYS	HEALTH PHYS	J MECH ENG	J MECH ENG SCI	PHYS NORVEG	PHYSICA NORVEGICA
ACT MICRO H	ACTA MICROBIOL ACAD SCI HUNG	BELL SYST T	BELL SYSTEM TECH J	HELV CHIM A	HELV CHIM ACTA	J MECH PHYS	J MECH PHYS SOLIDS	PHYS REV	PHYS REV
ACT MICRO P	ACTA MICROBIOL POLON	BER BUN GES	BER BUNDES GES PHYSIK CHEM	HELV CHIR A	HELV CHIR ACTA	J MED CHEM	J MED CHEM	PHYS REV A	PHYS REV
ACT MORPH H	ACTA MORPHOL ACAD SCI HUNG	BERUFSSOERM	BERUFSSOERMATOSEN	HELV MED A	HELV MED ACTA	J MED EDUC	J MED EDUC	PHYS REV B	PHYS REV
ACT NEUR SC	ACTA NEUROL SCAND	BIBL ANATHEA	BIBL ANATHEA ANAT	HELV PAEO A	HELV PAEDIAT ACTA	J METALS	J METALS	PHYS REV L	PHYSICS LETTERS
ACT OBST SC	ACTA OBSTET GYN SCAND	BIBL CARDIO	BIBLIOTHECA CARDIOL	BIBL PHYS ACTA	BIBL PHYS ACTA	J MICROSCOP	J MICROSCOP	PHYS ST SOL	PHYSICA STATUS SOLIDI
ACT OPTH K	ACTA OPHTHALMOL	BIBL GASTRO	BIBLIOTHECA GASTROENT	HELV PHYS	HELV PHYSIOL PHARM ACTA	J MILK FOOD	J MILK FOOD TECHNOL	PHYS TODAY	PHYSICS TODAY
ACT ORTH SC	ACTA ORTHOPAED SCAND	BIBL GYNAEC	BIBLIOTHECA GYNAECOL	HEREDITAS	HEREDITAS	J MOL BIOL	J MOL BIOL	PHYSICA	PHYSICA
ACT PAED H	ACTA PAEDIAT ACAD SCI HUNG	BIBL HAEM	BIBLIOTHECA HAEMATOL	HEREDITY	HEREDITY	J MOL SPECT	J MOL SPECTR	PHYSIOL REV	PHYSIOL REV
ACT PAED SC	ACTA PAEDIAT SCAND	BIBL MICROB	BIBLIOTHECA MICROBIOL	HIGH TEMP R	HIGH TEMP USSR ENGL TRANS	J MORPH	J MORPHOL	PHYSIOL BOHEM	PHYSIOL BOHEMOSLOV
ACT PATH JAP	ACTA PATHOL JAPON	BIBL NUTR O	BIBLIOTHECA NUTR OIETA	HISTOCHEMIE	HISTOCHEMIE	J NAT CANC	J NAT CANCER INST	PHYSIOL PLANTARUM	PHYSIOL PLANTARUM
ACT PATH SC	ACTA PATH MICROB SCAND	BIBL OPTH	BIBLIOTHECA OPHTHALMOL	HISTOCHEMIE	HISTOCHEMIE	J NE EXP NE	J NEUROPATHOL EXPTL NEUR	PHYSIOL ZOO	PHYSIOL ZOO
ACT PHARM T	ACTA PHARMACOL TOXICOL	BIBL DTD-RH	BIBLIOTHECA DTD-RHINO-LARYNGOL	HUMAN BIOL	HUMAN BIOL	J NE NE PSY	J NEUROLOGURG PSYCHIAT	PHYTOPATHOL	PHYTOPATHOLOGY
ACT PHYS AU	ACTA PHYS AUSTRIACA	BIBL PRIMAT	BIBLIOTHECA PRIMATOL	HUMAN DEVELP	HUMAN DEVELP	J NERV MENT	J NERVOUS MENTAL DIS	PLANET SPAC	PLANETARY SPACE SCI
ACT PHYS H	ACTA PHYS ACAD SCI HUNG	BIBL PSYC N	BIBLIOTHECA PSYCHIAT NEUROL	* I J BIDCHEM	INDIAN J BIOLCHEM	J NEUROCHEM	J NEUROCHEM	PLANT CEL P	PLANT CELL PHYSIOL
ACT PHYS L	ACTA PHYSIOL ACAD SCI HUNG	BIBL RADIO	BIBLIOTHECA RADIOLOG	BIBL PHYS ACTA	INDIAN J BIOLCHEM	J NEUROPSYCH	J NEUROPSYCH	PLANT PHYSIOL	PLANT PHYSIOL
ACT PHYSYL N	ACTA PHYSIOL LATINDAM	BIBL VIT HU	BIBLIOTHECA VITA HUMANA	I J EX BIOL	INDIAN J EXPTL BIOL	J NEURDSURG	J NEURDSURG	PLANTA	PLANTA
ACT PHYSYL N	ACTA PHYSIOL SCAND	BIBL BIEN J	BIOCHEM BIOPHYS ACTA	I J GENET P	INDIAN J GENET PLANT BREEDING	J NEURPHYS	J NEUROPHYSIOL	POINT P TEL	POINT POINT TELECOMMUN
ACT POLY CH	ACTA POLYTECH SCAND SER CH	BIOCH BIDP A	BIOCHEM BIOPHYS RES COMMUN	I J MED RES	INDIAN J MED RES	J NEW DRUGS	J NEW DRUGS	POST BIOCH	POSTOFFICE BIOCHEM
ACT POLY MA	ACTA POLYTECH SCAND SER MA	BIOCH PHARM	BIOCHEM PHARMACOL	I J PA PHYS	INDIAN J PURE APPL PHYS	J NUCL E AB	J NUCL ENERGY AB	POSTG MED J	POSTOFFICE ELEC ENG J
ACT POLY ME	ACTA POLYTECH SCAND SER ME	BIOCHEM J	BIOCHEM PHARMACOL	I J TECHN	INDIAN J TECHNOL	J NUCL E C	J NUCL ENERGY C	POSTGRAD MED J	POSTGRAD MED J
ACT POLY PH	ACTA POLYTECH SCAND SER PH	BIOCHEM Z	BIOCHEM J	I J RES	INDIAN J J OEV	J NUC MED	J NUC MED	POULTRY SCI	POULTRY SCI
ACT PSYC SC	ACTA PSYCHIAT SCAND	BIOCHEM Z	BIOCHEM J	ICARUS	ICARUS	J NUTR	J NUTR	POWER REACT	POWER REACTOR TECHNOL
ACT PSYTH	ACTA PSYCHOTHER	* BIOCHEMIS R	BIOCHEMISTRY USSR ENGL TRANS	IEEE A NAV	IEEE TR AEROSPACE NAV ELECTR	J OPT SOC	J OPTICAL SOC AM	PRAC DTD-RH	PRAC DTD RHIND LARYNGOL
ACT RAD OGN	ACTA RADIOLOG-DIAGNOSIS	BIOCL BULL	BIOCL BULL	IEEE AEROSP	IEEE TR AEROSPACE	J ORAL THER	J ORAL THER PHARMACOL	PRACITIONER	PRACITIONER
ACT RAD PR	ACTA RADIOLOG-THER PHYS BIOL	BIOCL NEURAT	BIOCL NEURAT	IEEE ANTENN	IEEE TR ANTENNAS PROPAGATION	J ORG CHEM	J ORG CHEM	* PRACITIONER	PRACITIONER
ACT SOC MED	ACTA SOC MED UPSALIE	BIOCL PLANT	BIOCL PLANT	IEEE APPL I	IEEE TR APPLICA INO	J ORGMET CH	J ORGOMET CH	PRACITIONER	PRACITIONER
ACT TUB SC	ACTA TURERIC PNEUM SCAND	BIOCL REV	BIOCL REV CAMBRIDGE PHIL SOC	IEEE AUDIO	IEEE TR AUDIO	J PARASITOL	J PARASITOL	PRACITIONER	PRACITIONER
ACT U CAR M	ACTA UNIV CAROLINAE MEDICA	BIOCL TRIC	BIOCL TRIC	IEEE AUTO C	IEEE TR AUTO CONTROL	J PATH BACT	J PATHOL BACTERIOL	PRACITIONER	PRACITIONER
ACT UN CANC	ACTA UNIO INTERN CONTRA CANC	BIOCL TRIC	BIOCL TRIC	IEEE B TELE	IEEE TR BROADCAST TELEV REC	J PEDIAT	J PEDIAT	PRACITIONER	PRACITIONER
ACT VET H	ACTA VET ACAD SCI HUNG	BIOCL TRIC	BIOCL TRIC	IEEE BIOME	IEEE TR BIO-MED ENG	J PERIODONT	J PERIODONTOL	PRACITIONER	PRACITIONER
ACT VIROLOG	ACTA VIROLOG ENGL ED	BIOCL TRIC	BIOCL TRIC	IEEE BRDACC	IEEE TR BROADCASTING	J PETROL TECH	J PETROL TECHNOL	PRACITIONER	PRACITIONER
ACT VITAMIN	ACTA VITAMINOL	BIOCL TRIC	BIOCL TRIC	IEEE C ELEC	IEEE TR COMMUN ELECTRON	J PHARM EXP	J PHARMACOL EXPTL THERAP	PRACITIONER	PRACITIONER
ACT ZOOL H	ACTA ZOOL ACAD SCI HUNG	BIOCL TRIC	BIOCL TRIC	IEEE C TECH	IEEE TR COMMUN TECHNOL	J PHARM PHA	J PHARM PHARMACOL	PRACITIONER	PRACITIONER
ACTIV NERV	ACTIVATIS NERVOUSA SUPER	BIOCL TRIC	BIOCL TRIC	IEEE CIRCT B	IEEE TR CIRCUIT THEORY	J PHARM SCI	J PHARM SCI	PRACITIONER	PRACITIONER
ACUSTICA	ACUSTICA	BIOCL TRIC	BIOCL TRIC	IEEE COMP P	IEEE TR COMPONENT PARTS	J PHYS CH S	J PHYS CHEM SOLIDS	PRACITIONER	PRACITIONER
ADV PHYSICS	ADV PHYSICS	BIOCL TRIC	BIOCL TRIC	IEEE COMPUT	IEEE TR ELECTRON COMPUTERS	J PHYS CHEM	J PHYS CHEM	PRACITIONER	PRACITIONER
ADV PSY MED	ADV PSYCHOSOM MED	BIOCL TRIC	BIOCL TRIC	IEEE DEVICE	IEEE TR ELECTRON DEVICES	J PHYS JAP	J PHYS SOC JAPAN	PRACITIONER	PRACITIONER
ADV SPA SCI	ADVANCE SPACE SCI TECHNOL	BIOCL TRIC	BIOCL TRIC	IEEE E WRIT	IEEE TR ENG WRITING SPEECH	J PHYSIQUE	J PHYSIQUE	PRACITIONER	PRACITIONER
AERONAUT Q	AERONAUT QUART	BIOCL TRIC	BIOCL TRIC	IEEE EDUCAT	IEEE TR EDUCATION	J PHYSIOL LON	J PHYSIOL LONDON	PRACITIONER	PRACITIONER
AEROSP MED	AEROSPACE MED	BIOCL TRIC	BIOCL TRIC	IEEE EL INS	IEEE TR ELEC INSULATION	J PHYSIOL PAR	J PHYSIOL PARIS	PRACITIONER	PRACITIONER
AGR BIOL CH	AGR BIOL CHEM TOKYO	BIOCL TRIC	BIOCL TRIC	IEEE EL MAG	IEEE TR ELECTROMAGNET COMPAT	J POL SCI A	J POLYMER SCI PT A	PRACITIONER	PRACITIONER
AGR HOR GEN	AGR HOR GENET LANOSKRONA	BIOCL TRIC	BIOCL TRIC	IEEE GEOSCI	IEEE TR GEOSCI ELECTRON	J POL SCI B	J POLYMER SCI PT B	PRACITIONER	PRACITIONER
AGRESSOLOG	AGRESSOLOGIE	BIOCL TRIC	BIOCL TRIC	IEEE HUMAN	IEEE TR HUMAN FACTOR ELECTRON	J POL SCI C	J POLYMER SCI PT C	PRACITIONER	PRACITIONER
ATAA J	ATAA J	BIOCL TRIC	BIOCL TRIC	IEEE IND AP	IEEE TR IND GEN APPLICA	J PRAK CHEM	J PRAK CHEM	PRACITIONER	PRACITIONER
AM CERAM S	AM CERAM SOC BULL	BIOCL TRIC	BIOCL TRIC	IEEE IND EN	IEEE TR IND ELEC CONTR INSTR	J PROS DENT	J PROSTHETIC DENTISTRY	PRACITIONER	PRACITIONER
AM DOCUMENT	AM DOC	BIOCL TRIC	BIOCL TRIC	IEEE INFO T	IEEE TR INFORM THEORY	J PROTOZOO	J PROTOZOO	PRACITIONER	PRACITIONER
AM HEART J	AM HEART J	BIOCL TRIC	BIOCL TRIC	IEEE INST	IEEE TR INSTR MEAS	J PSYCH RES	J PSYCH RES	PRACITIONER	PRACITIONER
AM IND HYG	AM IND HYG ASSOC J	BIOCL TRIC	BIOCL TRIC	IEEE J O E	IEEE TR QUANTUM ELECTRON	J PSYCHOL	J PSYCHOL	PRACITIONER	PRACITIONER
AM J ANAT	AM J ANAT	BIOCL TRIC	BIOCL TRIC	* IEEE MAGNET	IEEE TR MAGNETICS	J REIN MATH	J REINE ANGEW MATH	PRACITIONER	PRACITIONER
AM J BOTANY	AM J BOTANY	BIOCL TRIC	BIOCL TRIC	IEEE MANAGE	IEEE TR ENG MANAGEMENT	J REPR FERT	J REPR FERTILITY	PRACITIONER	PRACITIONER
AM J CLIN	AM J CLIN	BIOCL TRIC	BIOCL TRIC	IEEE MICR T	IEEE TR MICROWAVE THEORY TECH	J RES NBS A	J RES NAT BUR STD A PHYS CHEM	PRACITIONER	PRACITIONER
AM J CLIN N	AM J CLIN NUTR	BIOCL TRIC	BIOCL TRIC	IEEE MIL EL	IEEE TR MILITARY ELECTRON	J RES NBS B	J RES NAT BUR STD B MATH PHYS	PRACITIONER	PRACITIONER
AM J CLIN P	AM J CLIN PATHOL	BIOCL TRIC	BIOCL TRIC	IEEE NUC	IEEE TR NUCLEAR SCI	J RES NBS C	J RES NAT BUR STD C ENG INSTR	PRACITIONER	PRACITIONER
AM J DIG OIS	AM J DIGEST OIS	BIOCL TRIC	BIOCL TRIC	* IEEE PARTS	IEEE TR PTS WATER PACKAGING	J RES NBS D	J RES NAT BUR STD D RAD SCI	PRACITIONER	PRACITIONER
AM J DIS CH	AM J DIS CHILDREN	BIOCL TRIC	BIOCL TRIC	IEEE POWER	IEEE TR POWER APPARAT SYSTEM	* J RETIC SOC	J RETICULENDOTHELIAL SOC	PRACITIONER	PRACITIONER
AM J EPIDEM	AM J EPIDEMIOL	BIOCL TRIC	BIOCL TRIC	IEEE PROD E	IEEE TR PROD ENG PROD	J ROY AER S	J ROY AERON SOC	PRACITIONER	PRACITIONER
AM J GASTRO	AM J GASTROENTEROL	BIOCL TRIC	BIOCL TRIC	IEEE RELIAB	IEEE TR RELIABIL	J S IA MATH	J SOC IND APPL MATH	PRACITIONER	PRACITIONER
AM J HU GEN	AM J HUMAN GENET	BIOCL TRIC	BIOCL TRIC	IEEE SDN UL	IEEE TR SONICS ULTRASONICS	J SCI FOOD	J SCI FOOD	PRACITIONER	PRACITIONER
AM J MATH	AM J MATH	BIOCL TRIC	BIOCL TRIC	IEEE SPACE	IEEE TR SPACE ELECTRON TELEM	J SCI IND R	J SCI IND RES INOIA	PRACITIONER	PRACITIONER
AM J MED	AM J MED	BIOCL TRIC	BIOCL TRIC	IEEE SPECTR	IEEE TR SPECTRUM	J SCI INSTR	J SCI INSTR	PRACITIONER	PRACITIONER
AM J MED EL	AM J MED ELECTRON	BIOCL TRIC	BIOCL TRIC	IEEE VEHIC	IEEE TR VEHICULAR COMMUN	J SOC PSYCH	J SOCIAL PSYCHOL	PRACITIONER	PRACITIONER
AM J MED SCI	AM J MED SCI	BIOCL TRIC	BIOCL TRIC	ILL J MATH	ILLINOIS J MATH	J SOIL SCI	J SOIL SCI	PRACITIONER	PRACITIONER
AM J MENT O	AM J MENTAL EFFICIENCY	BIOCL TRIC	BIOCL TRIC	IMMUNOLOG	IMMUNOLOG	J SOUND VIB	J SOUND VIBRATION	PRACITIONER	PRACITIONER
AM J OBST G	AM J OBSTET GYNECOL	BIOCL TRIC	BIOCL TRIC	IND CHIM BELG	IND CHIM BELGE	J SPAC ROCK	J SPACECRAFT ROCKETS	PRACITIONER	PRACITIONER
AM J OPTH	AM J OPHTHALMOL	BIOCL TRIC	BIOCL TRIC	IND ENG CH	IND ENG CHEM	J SURG RES	J SURG RES	PRACITIONER	PRACITIONER
AM J ORTHOD	AM J ORTHODONT	BIOCL TRIC	BIOCL TRIC	IND ENG F	IND ENG CHEM FUNDAMENTALS	J THEOR BIO	J THEOR BIO	PRACITIONER	PRACITIONER
AM J P ANTH	AM J PHYS ANTHROPOL	BIOCL TRIC	BIOCL TRIC	IND ENG PPD	IND ENG CHEM PROD DESIGN DEV	J THOR SURG	J THORAC CARDIOVASC SURG	PRACITIONER	PRACITIONER
AM J PATH	AM J PATHOL	BIOCL TRIC	BIOCL TRIC	IND ENG PRD	IND ENG CHEM PROD RES DEVELOP	J TROP MED	J TROP MED HYG	PRACITIONER	PRACITIONER
AM J PHAR E	AM J PHARM EDUC	BIOCL TRIC	BIOCL TRIC	IND ENG R	IND ENG CHEM PROD RES DEVELOP	J ULTRA RES	J ULTRASTRUCT RES	PRACITIONER	PRACITIONER
AM J PHYS	AM J PHYS	BIOCL TRIC	BIOCL TRIC	IND MED SUR	IND MED SURG	J UROL	J UROL	PRACITIONER	PRACITIONER
AM J PHYSL	AM J PHYSIOL	BIOCL TRIC	BIOCL TRIC	INF CONTR	INFORM CONTR	J VACUUM SCI	J VACUUM SCI TECHNOL	PRACITIONER	PRACITIONER
AM J PSYCH	AM J PSYCHIAT	BIOCL TRIC	BIOCL TRIC	INF STORAGE	INFORM STORAGE RETRIEVAL	J VERB LEAR	J VERB LEARN VERB BEHAV	PRACITIONER	PRACITIONER
AM J PSYCHD	AM J PSYCHOL	BIOCL TRIC	BIOCL TRIC	INFRAR PHYS	INFRARED PHYS	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J PUB HE	AM J PUBLIC HEALTH	BIOCL TRIC	BIOCL TRIC	CAN J GENET	CAN J GENET	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J ROENTG	AM J ROENTGENOL	BIOCL TRIC	BIOCL TRIC	CAN J MATH	CAN J MATH	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J SCI	AM J SCI	BIOCL TRIC	BIOCL TRIC	CAN J MICRO	CAN J MICROBIOL	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J SURG	AM J SURG	BIOCL TRIC	BIOCL TRIC	CAN J PHYS	CAN J PHYS	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J TROP M	AM J TROP MED HYG	BIOCL TRIC	BIOCL TRIC	CAN J PSYCH	CAN J PSYCHOL	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER
AM J TROP M	AM J TROP MED HYG	BIOCL TRIC	BIOCL TRIC	CAN J PSYCH	CAN J PSYCHOL	J VITAMINOL	J VITAMINOL	PRACITIONER	PRACITIONER

CAN J ZOOL	CAN J ZOOL
CAN MED A J	CAN MED ASSOC J
CANCER	CANCER
CANCER RES	CANCER RES
CARDIOLOGIA	CARDIOLOGIA
CARYOLOGIA	CARYOLOGIA
CEREAL CHEM	CEREAL CHEM
CHEM ANALYST	CHEM ANALYST
CHEM BER	CHEM BER
CHEM BRIT	CHEM BRIT
CHEM COMM	CHEM COMMUNICATIONS
CHEM ENG PR	CHEM ENG PROGR
CHEM ENG SC	CHEM ENG SCI
CHEM INO L	CHEM INO LONDON
CHEM-ING-T	CHEM-ING-TECH
CHEM LISTY	CHEM LISTY
CHEM PHARM	CHEM PHARM BULL TOKYO
CHEM PR ENG	CHEM PROCESS ENG
CHEM REV	CHEM REV
CHEM ZEITUN	CHEMIEKER ZTG
CHEM ZVESTI	CHEM ZVESTI
CHEMOTHERA	CHEMOTHERAPIA
CHEM ANAL	CHEM ANAL PARIS
CHIM INO M	CHIM INO MILAN
CHIMIA	CHIMIA AARAU
CHIN MED J	CHINESE MED J
CHROMOSOMA	CHROMOSOMA
CIENTIA MEXICO	CIENTIA MEXICO
CIRCUL RES	CIRCULATION RES
CIRCULATION	CIRCULATION
CLIN CHEM	CLIN CHEM
CLIN CHIM A	CLIN CHIM ACTA
CLIN PEDIAT	CLIN PEDIAT
CLIN PHARM	CLIN PHARMACOL THERAP
CLIN SCI	CLIN SCI
COLD S HARB	COLD SPRING HARBOR SYMP
COLL CZECH	COLLECTION CZECH CHEM COMMUN
*COLLOID J R	COLLOID USSR ENGL TRANS
COM PL MATH	COMB PURE APPL MATH
COMB FLAME	COMBUST FLAME
COMM ACM	COMMUN ACM
COMP BIOCH	COMP BIOCHEM PHYSIOL
COMPT RENO	COMPT REND ACAD SCI
COMPUTER J	COMPUTER J
CONF NEUROL	CONFINEA NEUROL
CONF PSYCH	CONFINIA PSYCHIAT
CONTR RTI	CONTRIB BOYCE THOMPSON INST
CORNELL VET	CORNELL VET
CORROSION	CORROSION
CR SOC BIOL	COMPT REND SOC BIOL
CROAT CHEM	CROAT CHEM ACTA
CRYOGENICS	CRYOGENICS
CURR THER R	CURR THER RES
CURR SC SCI	CURR SC SCI
CYTODENET	CYTODENET
CYTOGENET	CYTODENET
CYTOLOGIA	CYTOLOGIA TOKYO
CZEC J PHYS	CZEC J PHYS
DAN SSSR	DKAL AKAD NAUK SSSR
DEN CLIN N AM	DEN CLIN N AM
DERMATOLOG	DERMATOLOGICA
DEUT MED W	DEUT MED WOCHSCHR
DEVELOP BIO	DEVELOP BIO
DIABETES	DIABETES
DIS CHEST	DIS CHEST
DIS COL REC	DIS COL RECTUM
DIS NER SYS	DIS NERVOUS SYSTEM
DISC FARAD	DISCUSSIONS FARADAY SOC
DISS PHARM	DISSERTATIONES PHARM
DOK OPHTHAL	DOK OPHTHALMOL
DUKE MATH J	DUKE MATH J
ECOL MONOGR	ECOL MONOGRAPHS
ECOLOGY	ECOLOGY
EEG CL NEUR	ELECTROENCEPH CL NEUROPHYSIO
ELECTR ENG	ELECTRON ENG
*ELECTR TECH	ELECTROCHEM TECHNOL
EMBRYOLOGIA	EMBRYOLOGIA NAGAYA
EMP J EX AG	EMPIRE J EXPTL AGR
ENOEAVOUR	ENOEAVOUR
ENODOCR JAP	ENDOCRINOL JAPON
ENDOCRINOLOGY	ENDOCRINOLOGY
ENDOKRINOL	ENDOKRINOLOGIE
ENERGA NUCL	ENERGIA NUCL MILAN
ENERGIE NUCL	ENERGIE NUCL
ENZ BIOL CL	ENZYMOL BIOL CLIN
ENZYMOLIA	ENZYMOLIA
ERDOL KOHLE	ERDOL KOHLE ERDOLAS PETROCHEM
EUGENIQUES Q	EUGEN QUART
EUPHYTICA	EUPHYTICA
EVOLUTION	EVOLUTION
EXP AGRICULT	EXPTL AGR
EXP CELL RE	EXPTL CELL RES
EXP EYE RES	EXPTL EYE RES
EXP MED SUR	EXPTL MED SURG
EXP MOL PAT	EXPTL MOL PATHOL
EXP NEUROL	EXPTL NEUROL
EXP PARASIT	EXPTL PARASITOL
EXPERIENTIA	EXPERIENTIA
EYE EAR NOS	EYE EAR NOSE THROAT MONTHLY
F CHEM ORG	FORT CHEM ORG NUTRATOFFE
F NEUR PSYC	FORT NEUROL PSYCHIAT
F ROENT NUK	FORT RONTGENSTRALH NUK MED
FARMACO PRA	FARMACO PAVIA ED PRAT
FARMACO SCI	FARMACO PAVIA EO SCI
FEO PROC	FERRATION PROC
FERTIL STERIL	FERTILITY STERILITY
FIN MED MED	FINSKA KEMISKA SANKUNDETS MEDO
FOL BIOL	FOLIA MICROBIOL PRAGUE
FOL MICROB	FOLIA MICROBIOL PRAGUE
FOL PRIMAT	FOLIA PRIMATOL
FOOD TECHN	FOOD TECHNOL
FUEL	FUEL
	* Titres added since May

JAP J PHYS
JAP J VET
JETP LETTER
K NEO AK A
K NEO AB K
K NEO AC K
KLIN WUCH
KOLLOID Z
KYBERNETIK
LAB ANIM CA
LAB INV
LANCE
LARYNGOSCDP
LLOYGIA
LUBRIC ENG
MAGY KEM LA
MAKROM CHEM
MARCONI REV
MAT FYS MED
MAT FYS SKR
MATER EVAL
MATER PROT
MATER RES S
MATH COMPUT
MATH NACHR
MATH Z
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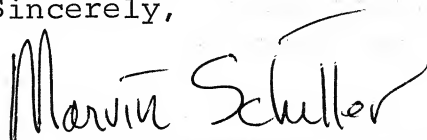
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